

REMARKS

Applicant is in receipt of the Office Action mailed November 21, 2003. Claims 1-26 remain pending in the case. Reconsideration of the present case is earnestly requested in light of the following remarks.

§102 Rejections

Claims 1-10 and 13-26 were rejected under 35 U.S.C. 102(b) as being anticipated by Kaiser et al. (U.S. Pat. No. 4,970,664, hereinafter “Kaiser”). Applicant submits that claims 1-26, as currently presented, are allowable based on the following reasoning.

The Examiner states in the Office Action: “With regard to claim 1, teaching a method for creating a graphical program including a plurality of portions of graphical source code to be executed sequentially, Kaiser teaches, in column 1, lines 30-42 and column 6, lines 11-17, a program consisting of graphical sources [sic] code which is executed sequentially.”

The Examiner cites Kaiser col 6, lines 11-17, and Kaiser discloses:

The screen display 10 and its features heretofore described is generated by source code written in C++. A copy of the code is attached as Appendix A. The source code uses data from graphics, connectivity, and path data structures, to be described, to generate the screen display. (Kaiser col 6, lines 11-17) (*emphasis added*)

Applicant submits that Kaiser teaches and discloses a system and method written in a text-based programming language such as “. . . source code written in C++” (Kaiser col 6, line 13) (*emphasis added*). Applicant respectfully submits that C++, like C and Java, is a text-based high level programming language, as described in Applicant’s Specification, which includes:

Many different high level programming languages exist, including BASIC, C, Java, FORTRAN, Pascal, COBOL, ADA, APL, etc. Programs written in these high level languages are typically translated to the

machine language level by translators known as compilers or interpreters. The high level programming languages in this level, as well as the assembly language level, are referred to herein as text-based programming environments. (Specification page 1, lines 8-13) (*emphasis added*)

As discussed above, computer programs used to control such systems traditionally had to be written in text-based programming languages such as, for example, assembly language, C, FORTRAN, BASIC, etc. Traditional users of these systems, however, often were not highly trained in programming techniques and, in addition, text-based programming languages were not sufficiently intuitive to allow users to use these languages without training. Therefore, implementation of such systems frequently required the involvement of a programmer to write software for control and analysis of instrumentation or industrial automation data. Thus, development and maintenance of the software elements in these systems often proved to be difficult. (Specification page 2, lines 13-21) (*emphasis added*)

U.S. Patent Nos. 4,901,221; 4,914,568; 5,291,587; 5,301,301; and 5,301,336; among others, to Kodosky et al disclose a graphical system and method for modeling a process, i.e., a graphical programming environment which enables a user to easily and intuitively model a process. The graphical programming environment disclosed in Kodosky et al can be considered a higher and more intuitive way in which to interact with a computer. A graphically based programming environment can be represented at a level above text-based high level programming languages such as C, Basic, Java, etc. (Specification page 2, lines 22-27) (*emphasis added*)

Applicant respectfully submits that Kaiser does not teach or suggest ". . . creating a graphical program including a plurality of portions of **graphical source code** to be

executed sequentially . . ." as recited in claim 1.

The Examiner states in the Office Action: "With regard to claim 1, further teaching the plurality of frames defining an execution order for the plurality of portions of graphical source code such that during execution of the graphical program the plurality of portions of graphical source code are executed sequentially, Kaiser teaches, in column 2, lines 20-24, the execution path of the frames being set up, and in column 1, lines 30-42, the sequential execution of the simulated circuit."

The Examiner cites Kaiser col 2, lines 20-24, and Kaiser discloses:

Another object of the invention is to provide such an apparatus that displays in a screen display a signal path entirely, the signal path having portions that appear on separate schematic sheets. (Kaiser col 2, lines 20-24) (*emphasis added*)

Kaiser further teaches and discloses:

A critical path may be selected from the path list window 12 via the control means for display of the path in its entirety apart from the schematic sheets. Upon its selection, a critical path is displayed in a path context window 16. As shown in FIG. 2, the path context window has a number of display portions of variable width for displaying path portions from separate schematic sheets. Together these display portions display a signal path in its entirety in a screen display such as window 16. For example [sic], with path 2 selected from window 12, a first display portion 18a graphically displays in isolation a path portion appearing on sheet 1 of filename ADD_DET apart from the schematic sheet, as indicated by a sheet identifier in the upper left corner of the display portion. The display portion 18a is defined by a path boundary 19 indicating the beginning of the path and a separator 20a indicating a transition to another schematic sheet. Within the display portion 18a are shown the instances and nets comprising the path portion. Also included is other data for the user, such as the name of the primary input, the circuit and commercial designations

for the instance and the cumulative signal delay along the path after each instance. (Kaiser col 4, lines 39-61) (*emphasis added*)

A second display portion 18b adjacent to the first portion 18a continues the signal path 2 by displaying a second path portion in isolation apart from its schematic sheet. Separator 20a, situated between the two display portions, is constructed of "down" arrows to indicate a transition to another sheet at a lower design level. A sheet identifier in the upper left corner of the display portion indicates that the path portion is found on sheet 1 of filename DECODE. This schematic, as will be described, shows the internal design of a decoder found in sheet 1 of filename ADD_DET. To assist the user in determining that this chip is the source of the path portion, a symbol 22 for the component is displayed in the display portion 18b adjacent to the path portion. Display portion 18b is bounded on its right by separator 20b. Because the following path portion continues on a higher level schematic sheet, separator 20b is constructed of "up" arrows to indicate the upward transition. If the following path portion had continued on an equal level schematic sheet, separator 20b would have indicated so with a vertical, line. (Kaiser col 4, line 63 - col 5, line 14) (*emphasis added*)

Thus, Kaiser teaches and discloses that a signal path is displayed in its entirety by multiple display portions in a window where each display portion corresponds to a single schematic sheet. Kaiser further teaches and discloses that if the signal path continues to a lower level schematic sheet, then the two display portions are separated by "down" arrows to indicate a transition to a schematic sheet at a lower design level. Kaiser also teaches and discloses that if the signal path continues to a higher level schematic sheet, then the two display portions are separated by "up" arrows to indicate a transition to a schematic sheet at a lower design level. Applicant submits that Kaiser teaches and discloses that the multiple display portions corresponding to schematic sheets can be logically bounded by separators in a graphical environment. Furthermore, Kaiser

teaches and discloses that a user is only able to select a signal path and then portions of a circuit are displayed where the portions are bounded by separators. Moreover, Kaiser teaches and discloses “A signal path is considered to be a sequence of pins through a design that a signal will follow” (Kaiser col 1, lines 45-47) (*emphasis added*). Therefore, Applicant respectfully submits that according to Kaiser a sequence of pins defines an execution order. Since the sequence of pins defines the execution order regardless of which schematic sheet the sequence of pins appear and thus regardless of which display portion they appear, the display portions bounded by separators do not define the execution order.

In contrast, Applicant’s invention, as recited in claim 1 includes “the plurality of frames define an execution order for the plurality of portions of graphical source code such that during execution of the graphical program the plurality of portions of graphical source code are executed sequentially.” Kaiser nowhere teaches or suggests this feature.

Accordingly, for at least the reasons provided above, Applicant respectfully submits that claim 1 and claims dependent thereon are patentably distinguished over Kaiser and are allowable.

Claims 14 and 21 include limitations similar to claim 1, and so the arguments presented above apply with equal force to these claims, as well. Applicant respectfully submits that for at least the reasons presented above, claims 14 and 21, and those claims respectively dependent thereon are patentably distinguished over Kaiser and are allowable.

Removal of the §102 rejections of claims 1-10 and 13-26 is respectfully requested.

§103 Rejections

Claims 11 and 12 were rejected under 35 U.S.C. as being unpatentable over Kaiser and Kodosky et al. (U.S. Pat. No. 5,301,301, hereinafter “Kodosky”).

The Office Action cites various of the dependent claims as being rejected under 35 U.S.C. 103. Applicant respectfully submits: “If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)” as stated in the MPEP §2143.03. With this in mind, Applicant respectfully submits that claims 1-26 are non-obvious over Kaiser and Kodolsky and are allowable. Additionally, the following arguments are presented to further clarify the nonobviousness of claims 11 and 12.

The Examiner states in the Office Action: “With regard to claim 11. . . It would have been obvious to one of ordinary skill in the art, having the teachings of Kaiser and Kodosky before him at the time the invention was made to modify the circuit program of Kaiser to include the parallel execution of two independent items as did Kodosky. One would have been motivated to make such a combination because electronic circuits have this functionality, so it would be useful to be able to simulate it” (*emphasis added*).

Kaiser’s Abstract teaches and discloses:

A screen display includes a path context window for displaying a signal path in its entirety apart from the schematic sheets on which the path portions appear. The window contains multiple display portions each graphically displaying a path portion appearing on a separate schematic sheet. The multiple display portions are arranged adjacent to each other to display the entire signal path as continuous. The screen display also includes a path list window and may include view sheet windows each showing a schematic sheet of a path portion in the path context window. A user selects a path from the path list window, which causes a path context window containing the selected path to appear. (*emphasis added*)

Kaiser also teaches and discloses:

In accordance with the invention, a screen display is described for displaying a signal path in its entirety in isolation from the schematic sheets on which the path portions appear. The screen display comprises multiple display portions, each portion graphically displaying in isolation

a path portion appearing on a separate schematic sheet. The multiple display portions are arranged adjacent to each other to display the signal path in its entirety in isolation from the schematic sheets. (Kaiser col 2, lines 32-40) (*emphasis added*)

Applicant respectfully submits that although Kaiser discloses portions of schematics having a plurality of electrical paths (in Kaiser's Figure 2, for example), Kaiser clearly teaches and discloses isolating and displaying a single path. Kaiser provides no teaching, disclosure, suggestion, or motivation to modify the circuit program of Kaiser to include the parallel execution of two independent items as did Kodosky. Therefore, Applicant respectfully submits that a *prima facie* case of obviousness has not been established to reject claim 11. Accordingly, Applicant respectfully submits that claim 11 is nonobvious over the cited art.

Furthermore, Applicant respectfully submits that with Kaiser teaching the isolation of a single path, combining the parallel execution of two independent items as within Kodosky would change the principle operation of what is taught and disclosed in Kaiser. As stated in the MPEP §2143.01 “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. *In re Ratti* , 270 F.2d 810, 123 USPQ 349 (CCPA 1959). . .” (*emphasis added*). Thus, Applicant respectfully submits that a *prima facie* case of obviousness has not been established to reject claim 11, and thus, claim 11 is nonobvious over the cited art.

Applicant thus submits that neither Kaiser nor Kodolsky, either singly or in combination, teaches Applicant's invention as presented in claim 11. Thus, for at least the reasons provided above, Applicant respectfully submits that claim 11 is allowable.

The Examiner states in the Office Action: “With regard to claim 12. . .Kaiser, however, doesn't teach a frame containing another frame of graphical source code, and displaying a frame that contains another frame containing graphical source code. Kodosky teaches a circuit grouping and execution similar to Kaiser, but further teaches

that a circuit can contain a frame that contains a second frame with a plurality of graphical source code included (see figure 3 and column 1, lines 23-43). Kodosky further teaches displaying this frame that contains another frame containing graphical source code wherein a plurality of frames are displayed a [sic] the same time (see figure 3 and column 1, lines 23-43). It would have been obvious to one of ordinary skill in the art to modify Kaiser to include the ability to embed a frame in another frame as did Kodosky. One would have been motivated to make such a combination because electronic circuits have this functionality so it would have been useful to be able to simulate it." (*emphasis added*)

Applicant respectfully submits that Applicant has examined many complex electronic circuits and has not found an electronic circuit containing a frame that contains a second frame with a plurality of graphical source code included. Even if Kaiser's prior art "may be capable of being modified to run the way the [Applicant's] apparatus [invention] is claimed, there must be a suggestion or motivation in the reference to do so." 916 F.2d at 682, 16 USPQ2d at 1432 (*emphasis added*). Applicant respectfully submits that Kaiser does not provide any teaching, disclosure, suggestion, or motivation to modify Kaiser to include functionality in Kodosky. Applicant thus submits that neither Kaiser nor Kodolsky, either singly or in combination, teaches Applicant's invention as presented in claim 12. Applicant respectfully submits that a *prima facie* case of obviousness has not been established. Accordingly, Applicant respectfully submits that claim 12 is nonobvious over the cited art, and is thus allowable.

Applicant also asserts that numerous ones of the dependent claims recited further distinctions over the cited art. However, since the independent claims have been shown to be patentably distinct, a further discussion of the dependent claims is not necessary at this time.

CONCLUSION

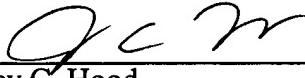
Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5150-49000/JCH.

Also enclosed herewith are the following items:

- Return Receipt Postcard
- Request for Approval of Drawing Changes
- Notice of Change of Address
- Check in the amount of \$ _____ for fees (_____).
- Other:

Respectfully submitted,



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